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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,423	03/16/2006	Joseph Bertony	026328-00007	4452

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EXAMINER	
WIEHE, NATHANIEL EDWARD	

ART UNIT	PAPER NUMBER
3745	

NOTIFICATION DATE	DELIVERY MODE
02/15/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com
IPMatters@arentfox.com
Patent_Mail@arentfox.com

Office Action Summary	Application No.	Applicant(s)	
	10/528,423	BERTONY, JOSEPH	
	Examiner	Art Unit	
	NATHANIEL WIEHE	3745	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 12 December 2007 have been fully considered but they are not persuasive.

The newly presented claim limitation of "substantially rigid" is not specifically recited in the originally filed specification and therefore conveys only that the blades are substantially rigid enough so as to perform the function of being wind turbine blades. To this end the fabric blades of Saiz meet the claim limitation in that they are under enough tension so as to be rigid enough to properly function as wind turbine blades. Also, the dihedral form of Saiz's blades provides a cross-sectional thickness of the *blade* that increases along the longitudinal axis [emphasis added]. Additionally, there is no indication that the fabric sails of Saiz flap as asserted by applicant, again the fabric is under sufficient tension so as to be substantially rigid.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1,3,4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saiz (5,784,978) in view of Benesh (4,359,311). Saiz discloses a wind turbine rotating about a longitudinal axis perpendicular to the direction of fluid flow. The turbine includes dihedral blades, formed by adjacent sails (3,3') connected along edges (7,7'),

having an axial cross-sectional width that increases along the axis (See Fig. 1). The leading edge surface of the blades would diver fluid flow impinging thereon generating a zone of reduced fluid pressure and the trailing surfaces would have turbulent fluid flow impinging thereon to generate a zone of increase fluid pressure acting thereon due to the blades dihedral shape. Saiz's blades/sails are arranged tangentially to the axis and therefore have a pitch of 90°. Saiz does not disclose the use of three equally spaced blades. Benesh discloses the use of three symmetrically disposed blades in a vertical axis turbine reduces vibrations caused by variations of starting torque directions (Benesh column 1, lines 43-49). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the vertical axis turbine of Saiz by using a three blade arrangement as taught by Benesh for the purposed of reducing starting torque induced vibration.

Claims 2 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saiz (5,784,978) in view of Benesh (4,359,311) as applied to claims 1 and 11 above, and further in view of Kolozsy (1,172,149). The modified invention of Saiz discloses the invention substantially as claimed except for the use of longitudinally extending rearwardly inclined edge strip. Kolozsy discloses a vertical axis turbine including a plurality of blades (22) with a longitudinally extending edge strip (23). The edge strips of Kolozsy are indicated as assisting the rotation of the rotor due to the impingement of wind on the blades (22) (Kolozsy page 1, line 57-63). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the vertical axis turbine of Saiz by including an edge strip as

taught by Kolozsy for the purpose of assisting the rotation of the rotor due to the impingement of wind thereon. Additionally, the strips of Kolozsy appear to be flush with both the leading and trailing surfaces at least as evidenced by the fact that they extend along the entire periphery of the blade identically to the strips disclosed by applicant.

Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saiz (5,784,978) in view of Benesh (4,359,311) as applied to claim 1 above, and further in view of Wilhelm (5,044,878). The modified invention of Saiz discloses the invention substantially as claimed except for the use of a plurality of turbines mounted along the longitudinal axis. Wilhelm discloses a vertical axis turbine including multiple turbine rotors (11,12) mounted along the longitudinal axis. These rotors are radially displaced from one another by 60°. The use of multiple offset rotors in known to provide smooth output torques due to the more consistent blade surface area exposure provide by the offset relationship. Therefor, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the vertical axis turbine of Saiz by utilizing multiple turbine rotors that are radially displaced from one another as taught by Wilhelm for the purpose of providing a smooth output toque.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saiz (5,784,978) in view of Benesh (4,359,311) as applied to claim 1 above, and further in view of Bergstein (5,333,996). The modified invention of Saiz discloses the invention substantially as claimed except for the use of a liquid to cause rotation of the turbine and the turbine being connected to an electric generator. However, it is well known in the art of vertical axis turbines to not only utilize wind, but also water as the motive fluid,

since they are both naturally occurring fluid current. It is also known to provide the rotation output of the turbines to an electrical generator for producing electricity. Bergstein evidences both of these uses for a vertical axis turbine. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the vertical axis turbine of Saiz by utilizing a liquid motive fluid and coupling the turbine to a generator since doing so it known in the art of vertical axis turbines, as evidenced by Bergstein.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHANIEL WIEHE whose telephone number is (571)272-8648. The examiner can normally be reached on Mon.-Thur. and alternate Fri., 7am-4:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571)272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathan Wiehe
Examiner
Art Unit 3745

EDWARD K. LOOK
SUPERVISORY PATENT EXAMINER
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2/7/08